AFGROLAND

(African Food, Agriculture, Land and Natural Resource Dynamics, in the context of global agro-food-energy system changes)

How national and local contexts shape the impacts of foreign investment in land: a comparative analysis from three African countries

ICRD, Bern,7. Sept 2017

Presenter: Markus Giger

Co-authors:
Ward Anseeuw, Eve Fouilleux, Sheryl Hendricks, Sara Mercandalli, Perrine Burnod, Sandra Eckert,
Boniface Kiteme, Christoph Oberlack, Aurélien Reys, Julie Zähringer, Camilla Adelle, Michael Van Der Laan, Peter Messerli,

Partners:

Observatoire du Foncier
Madagascar

Funders:

Objective of the project

- To analyze how large agricultural investments (LAI) impact on countries in Africa …
- …particularly with regards to governance of agricultural investments, business models, land use and environmental services as well as livelihoods& food security

Research Questions

What are the main policy drivers of LAI in three African countries?

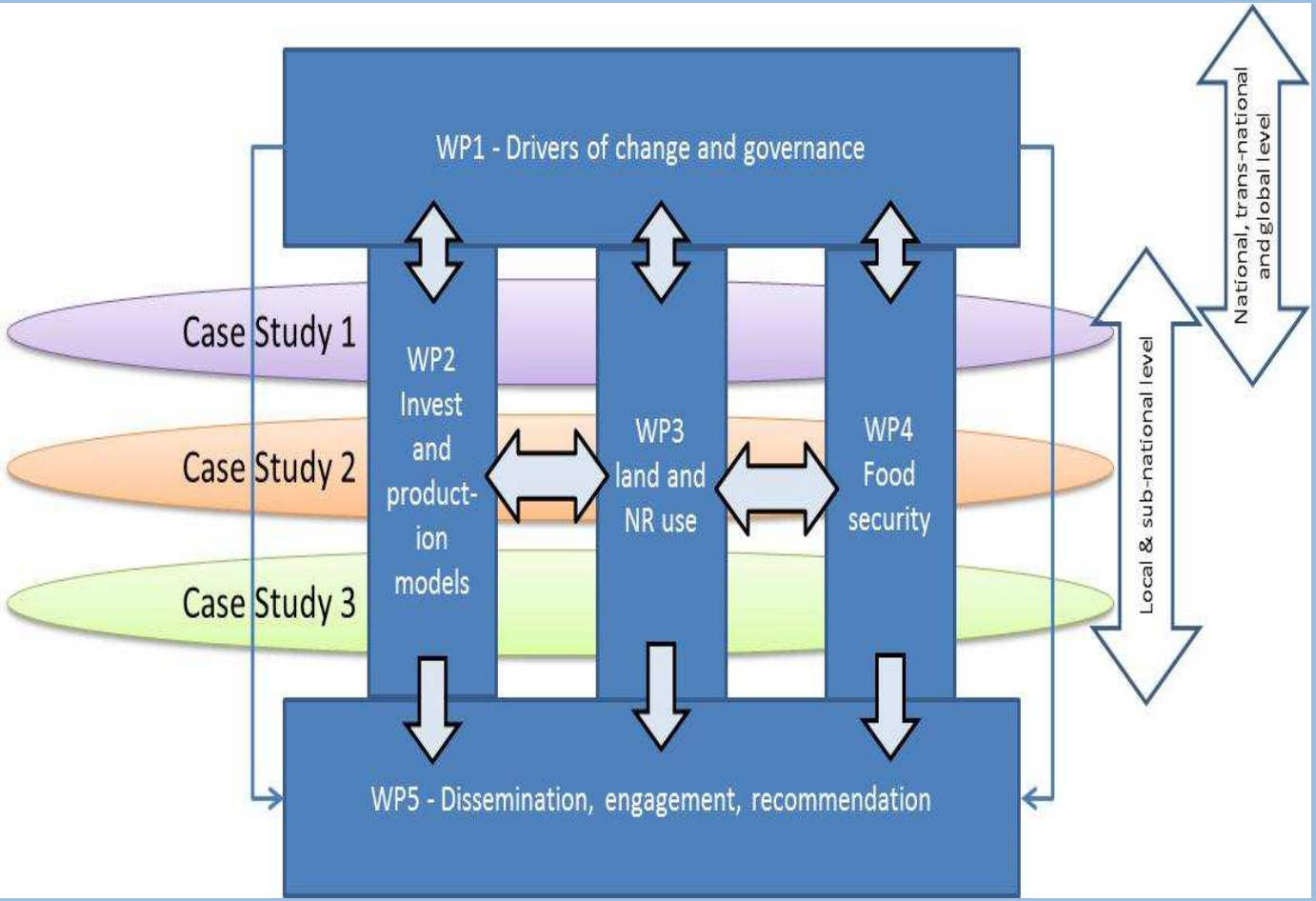
What are the main investment strategies and business models for LAI and how do they shape impacts?

What are the impacts of LAIs on land, water and soil, and related ecosystem services?

What are the impacts of LAI on livelihoods and food security?

The same methedodologies and tools are used in all the three countries – comparative approach becomes possible.

Overall structure of the project



Kenya	Mozambique	Madagascar
		

Country Profiles

	Kenya	Mozambique	Madagascar
	2016	2016	2016
Population growth (annual %)	2.6	2.9	2.7
Population density (people per sq. km of land area)	85	37	43
GNI per capita, Atlas method (current US$)	1,380	480	400
Life expectancy at birth, total (years)	62	55	65
Primary completion rate, total (% of relevant age group)	105	48	69
GDP (current US$) (billions)	71	11	10
GDP growth (annual %)	6	4	4
Agriculture, value added (% of GDP)	36	25	24
Time required to start a business (days)	22	19	11
Tax revenue (% of GDP)	16	23	10
Mobile cellular subscriptions (per 100 people)	81	74	44
Foreign direct investment, net inflows (BoP, current US$) (millions)	1,437	3,868	517

Source: World Development Indicators database
Figures in blue refer to periods other than those specified.
Last Updated:06/30/2017

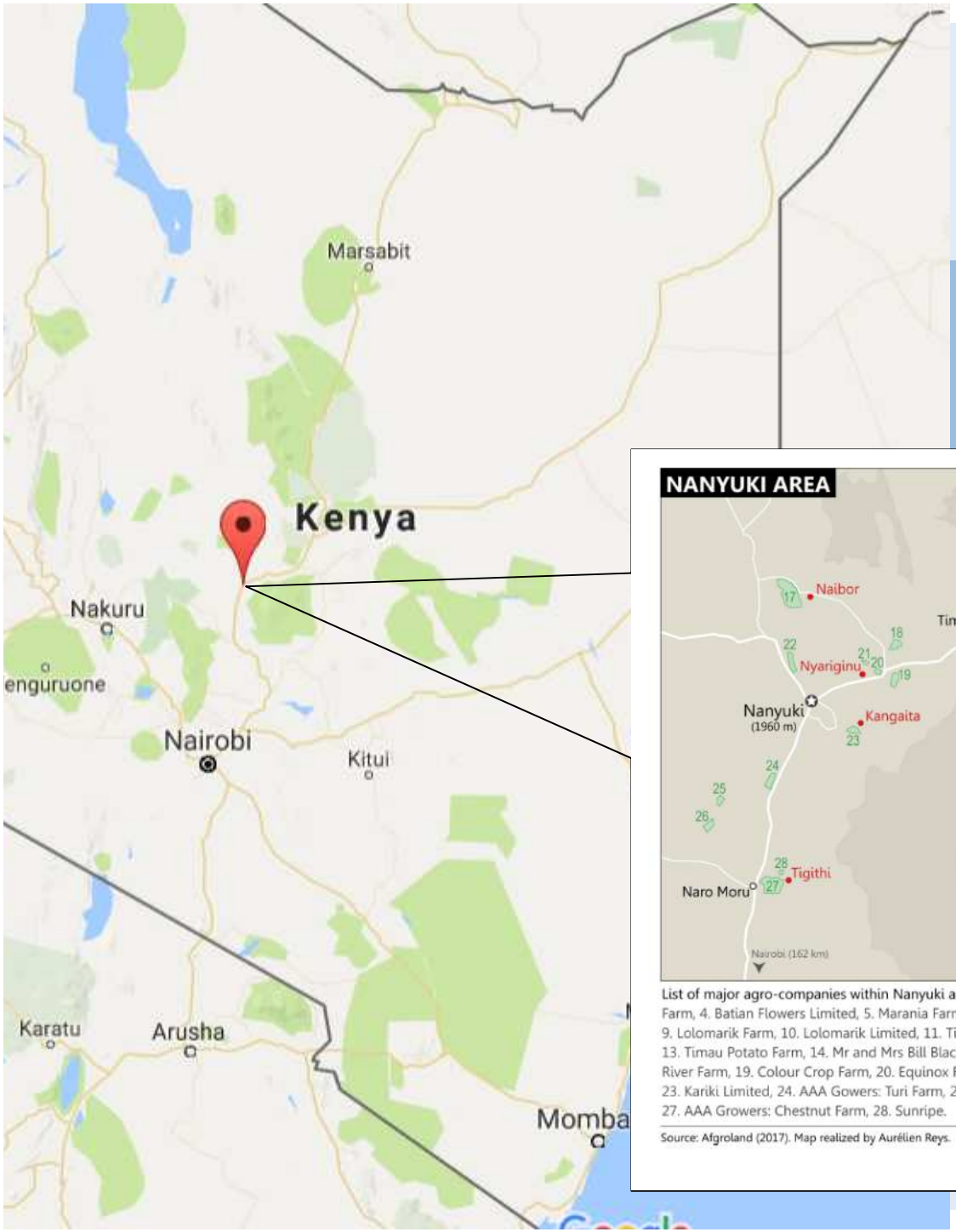
Governance context in three countries

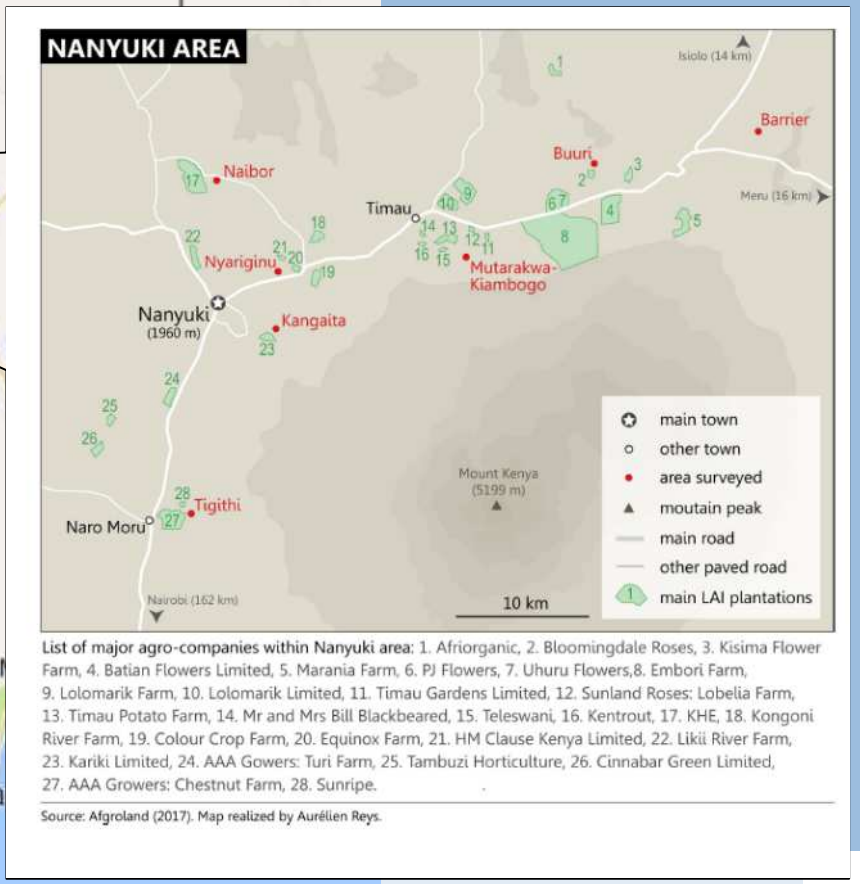
	Kenya	Mozambique	Madagascar
Relevant policies	New National Land Policy and New Forest Act (2005), Government Lands Act, Registered Land Act, and others	DUAT, *cessão de exploração* Regulation Proposal, Strategic Plan for the Development of the Agricultural Sector, Action Plan for Food Production, Growth corridors	Land Laws (2005) securing customary rights, land and agricultural programmes (2015) Programme Sectoriel Agriculture Elevage Peche /Plan National D'investissement Agricole (2016-2020)
Land tenure	Relatively secure through titles in some areas, but in others government land prevails, making access unsecure.	Progressive (protective) land law, but private actors have huge influence in decision making on LAIs.	Current policy foresees large volumes of land for agro-investments. However, procedures are lengthy and investors plots overlap on traditional pastures

Governance context in three countries

	Kenya	Mozambique	Madagascar
Food Security and nutrition	National Food and Nutrition Security Policy (2011) National Nutrition Action Plan (2012 – 2017)	To be added.	Madagascar National Action Plan for Nutrition 2012–2015 (PNAN II) Multisectorial Plan For Chronic Malnutrition Reduction In Mozambique 2011 – 2014 (2020) **Food and Nutrition Security**Strategy and **Plan** of **Action** (ESAN II / **PASAN** 2008 – 2015)

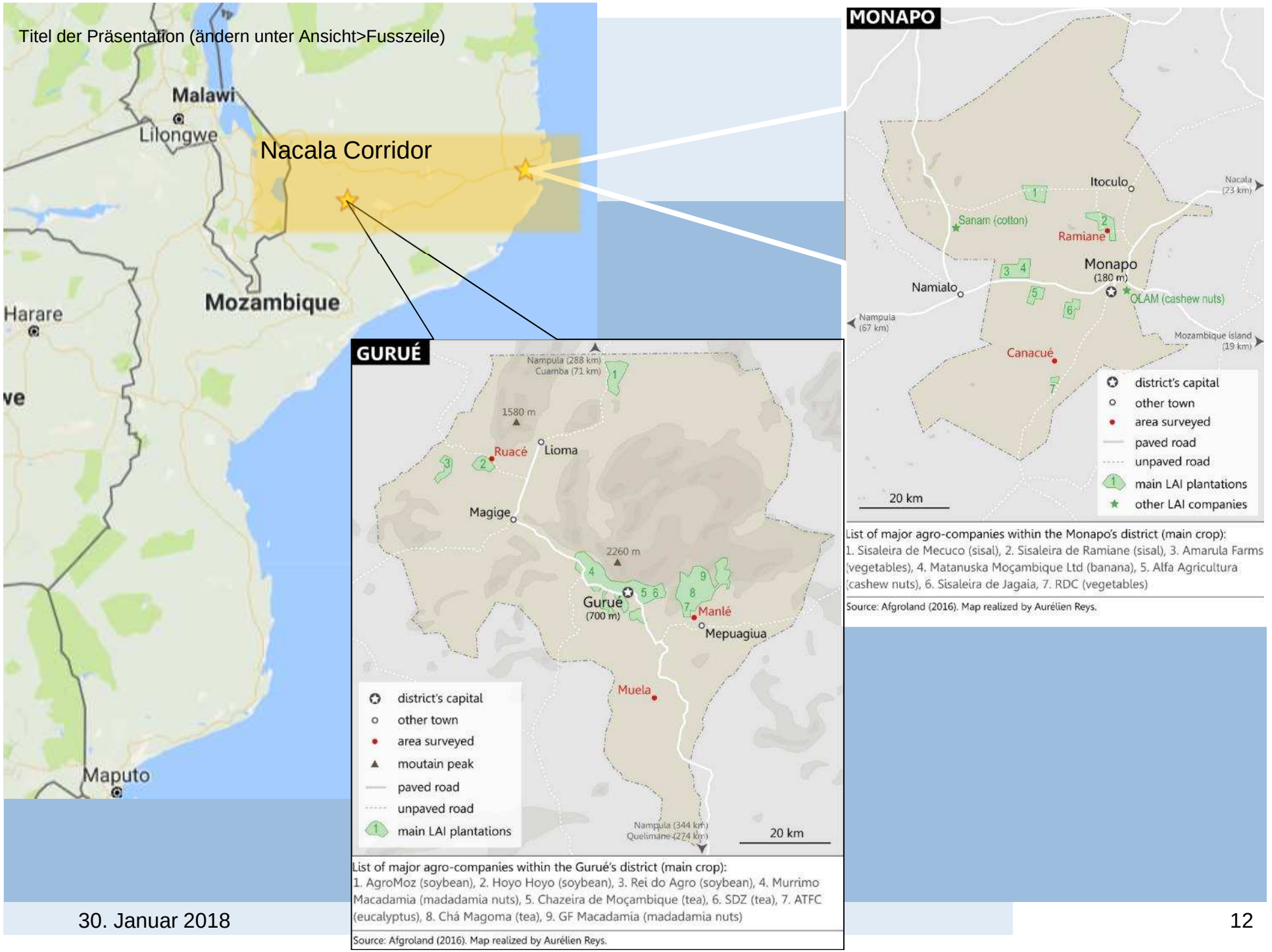
The case study areas





List of major agro-companies within Nanyuki area: 1. Afriorganic, 2. Bloomingdale Roses, 3. Kisima Flower Farm, 4. Batian Flowers Limited, 5. Marania Farm, 6. PJ Flowers, 7. Uhuru Flowers,8. Emborí Farm, 9. Lolomarik Farm, 10. Lolomarik Limited, 11. Timau Gardens Limited, 12. Sunland Roses: Lobelia Farm, 13. Timau Potato Farm, 14. Mr and Mrs Bill Blackbeared, 15. Teleswani, 16. Kentrout, 17. KHE, 18. Kongoni River Farm, 19. Colour Crop Farm, 20. Equinox Farm, 21. HM Clause Kenya Limited, 22. Likii River Farm, 23. Kariki Limited, 24. AAA Gowers: Turi Farm, 25. Tambuzi Horticulture, 26. Cinnabar Green Limited, 27. AAA Growers: Chestnut Farm, 28. Sunripe.

Source: Afgroland (2017). Map realized by Aurélien Reys.



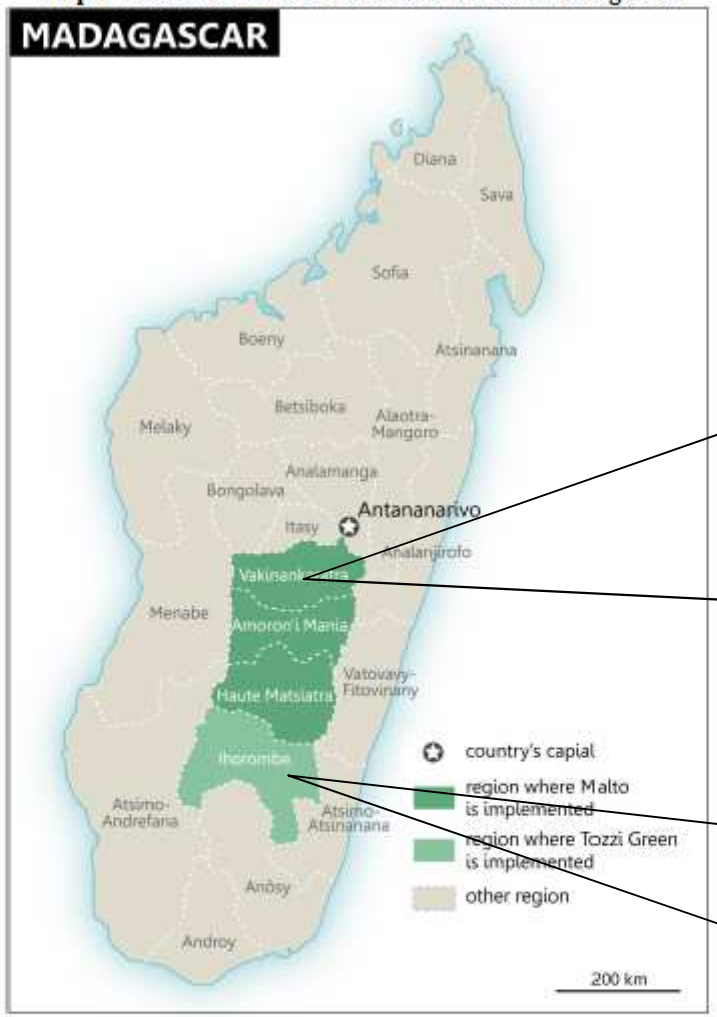
List of major agro-companies within the Gurué's district (main crop):
1. AgroMoz (soybean), 2. Hoyo Hoyo (soybean), 3. Rei do Agro (soybean), 4. Murrimo Macadamia (madadamia nuts), 5. Chazeira de Moçambique (tea), 6. SDZ (tea), 7. ATFC (eucalyptus), 8. Chá Magoma (tea), 9. GF Macadamia (madadamia nuts)

Source: Afgroland (2016). Map realized by Aurélien Reys.

List of major agro-companies within the Monapo's district (main crop):
1. Sisaleira de Mecuco (sisal), 2. Sisaleira de Ramiane (sisal), 3. Amarula Farms (vegetables), 4. Matanuska Moçambique Ltd (banana), 5. Alfa Agricultura (cashew nuts), 6. Sisaleira de Jagaia, 7. RDC (vegetables)

Source: Afgroland (2016). Map realized by Aurélien Reys.

Map 1. Locations of Malto and Tozzi Green in Madagascar

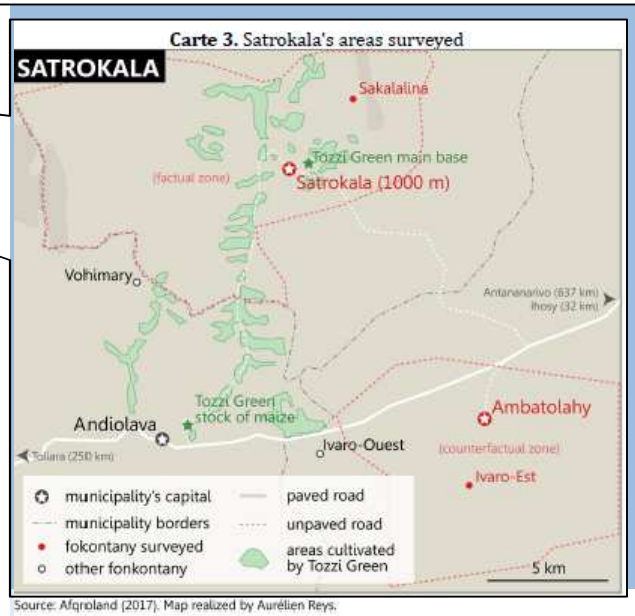


Source: Afgroland (2017). Map realized by Aurélien Reys.

Carte 2. Ambatofinandrahana's areas surveyed

Source: Afgroland (2017). Map realized by Aurélien Reys.

Carte 3. Satrokala's areas surveyed



Source: Afgroland (2017). Map realized by Aurélien Reys.

3. Survey overview

The survey was implemented from the 3/04/2017 and the 25/04/2017 by 2 groups of 5 enumerators (10 enumerators in total), the first group in Ambatofinandrahana/Malto's area and the second group in Statrokala/Tozzi Green's area. It was coordinated by Bezaka Rivolala, Nirina Rabevohitra and Onivola Ratsaramiarina – ROR, Perrine Burnod and Aurélien Reys – CIRAD.

Three different trajectories of agricultural investments

- Different colonial past (British, Portugese, French)
- Different paths towards independence
- Different legal frameworks and land tenure systems
- Different resource endowments
- Different levels of economic development

Large-scale Agricultural Investments (LAI) - differences in implementation

Kenya	Mozambique	Madagascar
Relatively well established agricutural sector, both small-scale and agro-industrial sectors. In some regions of the country: Large land investments announced on government held land, but most now abandoned. **LAI:** In study region, labour intensive horticulture, large capital investments, relatively small in size. **Access to land** through purchase, inheritance and leases.	Total announced 2.6 M ha land deals (many are forestry) 2004-2009, 20% overlapping with community land Focus on six growth corridors Influence of foreign donors. Slow implementation. **LAI:** High number of on-going investments, mechanised field crops. Sometimes partial implementation only, many on former colonial investments **Acess to land** through government, sometimes bypassing legal provisions and community rights..	Huge interest for Land (3 M ha annnounced in 2009). Geographically dispersed + smaller crop area cultivated than planned **LAI**: 95% not realized (in 2016), only five cases left. Remaining investors have particular profiles (long-term, philantropic). **Access to land**: Lengthy and complicated land aquisition process. .

Household Socio-Economic Impacts

KENYA

- LAIs **<u>are not a source of land conflict</u>** (in study region)
- **<u>LAIs (especially flower farms) create many jobs / ha</u>**
  - Jobs are attractive to migrant workers.
  - Female workers, notably employed in flower processing units, are slightly more numerous than male
  - Youth generally work for a few years in LAI to cover daily expenses and to save money. They then strive to run their own farm or business
- Agricultural households involved in **contract farming** for LAI generally have **<u>better non productive and productive assets</u>** than those without any connections with LAIs

Households Socio-Economic Impacts

MOZAMBIQUE

- **LAIs are an important cause of land conflict, 35% of households** claim to have lost some land because of LAI. Cases of eviction and maltreatment reported

- **LAIs create relativ few jobs (because there are not processing units, and mechanised field crops mainly**
  - Employees are **mostly males**
  - Wages are mainly invested in **daily expenses**.

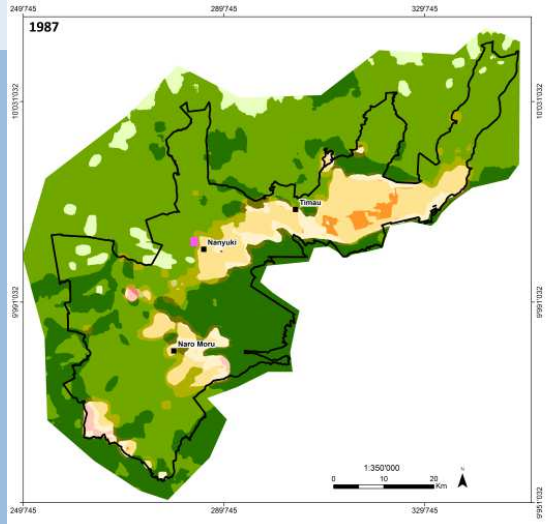
- HH working with LAI (wage workers or contract farmers) have **better non productive assets** than other

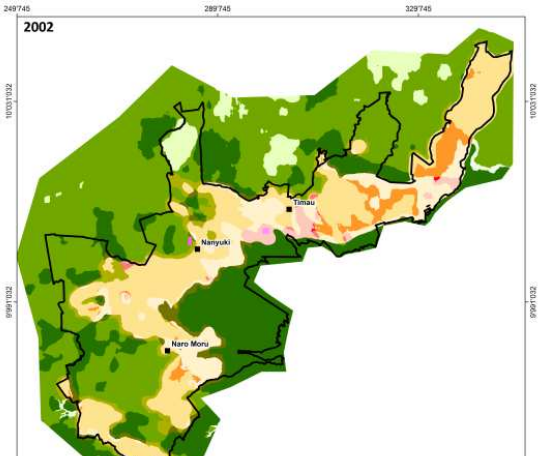
Households Socio-Economic Impacts

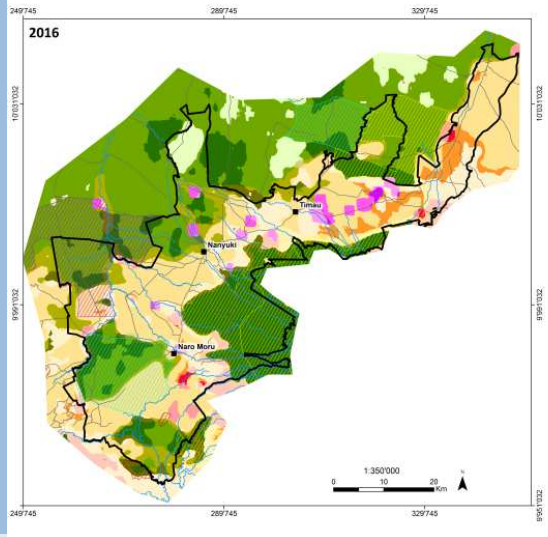
MADAGASCAR

- **<u>Land conflicts depend on the business model:</u>** Large estate plantations are a cause of land conflict with the local cattle owners and herders, companies doing contract farming create no land conflicts
- **<u>Job creation depends on the business model:</u>** Estate plantations create fewer jobs per ha, but contract farming reinforces existing jobs
  - Employees are mainly migrants, young people and males.
  - Money earned (wages, contract remunération) is first spent to cover **daily expenses, education fees** and then **<u>farm investments</u>** (notably for farmers involved in contract farming)
- HHs working with LAIs (workers and contract farmers) have **<u>better non-productive assets</u>** than others

“Agricultural Expansion and Intensification in the Foothills of Mount Kenya: A Landscape Perspective

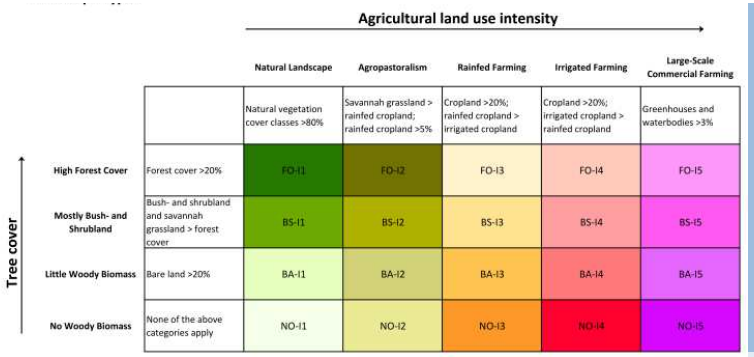






Rapid expansion of cropland notably from 1987 to 2002

Agricultural intensification along main road and around LAIs (especially since 2002)



Eckert et al., 2017. In: Remote Sensing

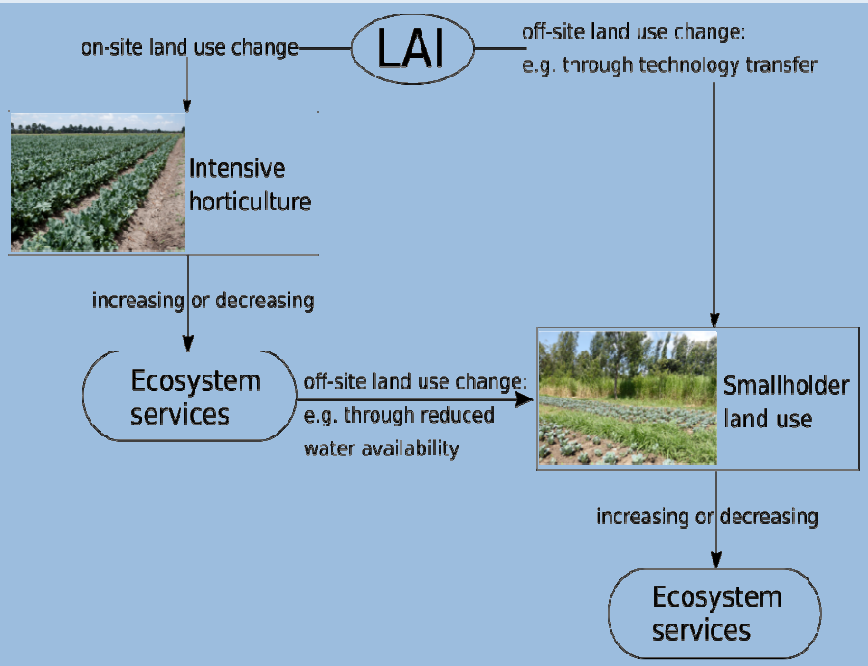
Landscape Types

Agricultural land use intensity →

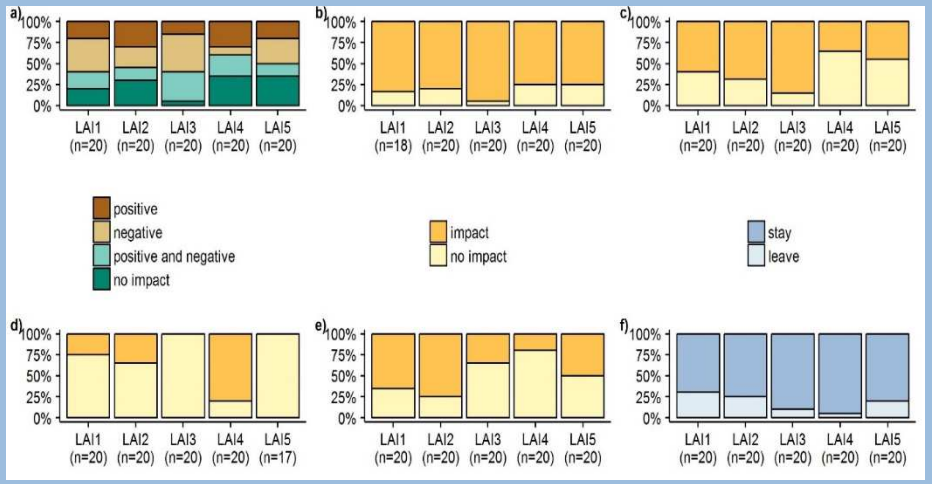
Tree cover ↑

		Natural Landscape	Agropastoralism	Rainfed Farming	Irrigated Farming	Large-Scale Commercial Farming
		Natural vegetation cover classes >80%	Savannah grassland > rainfed cropland; rainfed cropland >5%	Cropland >20%; rainfed cropland > irrigated cropland	Cropland >20%; irrigated cropland > rainfed cropland	Greenhouses and waterbodies >3%
High Forest Cover	Forest cover >20%	FO-I1	FO-I2	FO-I3	FO-I4	FO-I5
Mostly Bush- and Shrubland	Bush- and shrubland and savannah grassland > forest cover	BS-I1	BS-I2	BS-I3	BS-I4	BS-I5
Little Woody Biomass	Bare land >20%	BA-I1	BA-I2	BA-I3	BA-I4	BA-I5
No Woody Biomass	None of the above categories apply	NO-I1	NO-I2	NO-I3	NO-I4	NO-I5

Effects on land use and the environment on the western slopes of Mount Kenya.
Empirical evidence based on small-scale farmers' perceptions



Conceptual framework illustrating how LAIs affect ecosystem services through on-site and off-site land use changes



Perceived direct impacts of LAIs on (a) households, (b) the environment, (c) people's health, (d) infrastructure, and (e) conflicts, as well as (f) overall preference of households for LAI companies to remain or leave, all expressed as percentage of households reporting impacts or no impacts (a–e) or a certain preference (f)

Zaehringer et al. (under review)

Effects on land use and the environment on the western slopes of Mount Kenya?
Empirical evidence based on small-scale farmers' perceptions

Main results:

- **Perceived decrease in available water resources has led many smallscale farmers to change cropland management practices**
- **Main perceived environmental impacts of LAIs are air and water pollution**
- **Positive spillovers in terms of agricultural technologies were scarce**

Zaehringer et al. (under review)

How do large-scale agricultural investments affect land use and the environment in the Nacala corridor, Mozambique?

Preliminary results:

- 101 smallscale farmers interviewed with in 2 km buffer around 6 LAIs (3 soy, 1 macadamia, 1 banana, 1 vegetables) in Gurué and Monapo districts
- 52% of HH lost land to LAIs, mainly in Gurué district, half of them compensated
- 29% of HH then acquired new cropland, however, smaller than before and mostly of lower quality, more than half of them expanded into forests → indirect land use change
- 14% changed crop management due to presence of LAI
- 36% of HH perceived environmental impacts from LAIs, mainly occupation of water sources (12%)
- 54% of HH would prefer LAIs to leave

Zaehringer et al. (in prep.)

Kenya

- Relatively successful development of agricultural sector building on both small-scale and large scale agriculture
- Export crops are important pillar of the economy (flowers, horticulture)
- Labour-intensive business models for horticulture/floriculture have developed, fully developed value chains (inputs, processing, exporting)
- Mostly smaller spatial scale, but capital intensive
- Access to land mainly through leases, purchase from previous private owners and inheritance, tenure rights are secured (in the study area, not all over the country)
- Investors are mostly Kenyan, some with investments links to Europe
- Few large scale investments have been announced; in areas where government trust land is predominant, most are abandoned.

Mozambique

- High potential for large scale agriculture announced
- Focus on six «growth corridors»
- High number of on-going investments
- Slow implementation, most cases focus on re-investment on previous, colonial investments
- Access to land through DUAT (land lease)
- Investments mainly in field crops, intermediate technical level
- Very progressive land tenure laws, however implementation is bypassing these
- Cases of eviction of local people reported
- High influence of international initiatives New Alliance for Food Security and Nutrition in Africa (NAFSN) framework, World Economic Forum's Initiative for Africa (growth corridors) etc.
- …

Madagascar

- Huge interest in land (3 M ha) from international and national investors,
- 82 companies announced plans to develop a large-scale farm between 2005 and 2014,
- 95% not realized by 2016
- Currently, still 2 M ha planned in current agricultural policy
- Investors are mostly domestic with a few long-term, individual, and/or philantropic investors
- Geographically dispersed across the country, no investment region/corridor is descernable
- Lengthy and conflicting land concession process
- Land plots overlap mainly on pastural land

Policy and Legislative drivers of LAIs in Kenya

- Huge body of supportive and regulatory provisions that are underpinned by the constitution and fortified by a diversity of relevant legislation and policy instruments
- **Kenya has ratified most relevant international legal instruments and global initiatives on diverse areas that promote and regulate LAIs**: trade, labour, human rights, environment, biodiversity etc.
- However many of these national/county regulatory apparatus have remained largely ineffective owing to inherent institutional weaknesses
- **The international legal instruments and initiatives are also scantly known and poorly utilized except** for the institutions or organizations that are directly responsible for their negotiations and enforcement.
- The new governance structures at the county level have not fully become operational and the linkage between the national and county governance is still infant and largely weak.

Business Models

- In many studies on land aqusitions business models are not analysed
- We identify 6 criteria, based on previous research and our inventories of LAI

Type of actors	Degree of integration	Model of investment	Juridical form	Organization of the agricultural production model	Technical agricultural model	Ways of accessing land

Business Models found in Kenya Case Study

Type of actors	Degree of integration	Model of investment	Juridical form	Organization of the agricultural production model	Technical agricultural model	Ways of accessing land
National investors (85%) Most of them with long-term experience in Kenyan agriculture	Only four (out of 33) are affiliated to international mother companies Mostly just production and transport to national market or airport; Markets in Europe, Gulf and Nairobi	Self-financed, loans, mix of both	Private companies with shareholding (52%) Private companies without shareholding (27%) Individual enterpreneurs/ farmers (21%)	Mostly own production, some outgrowers, limited contract farming (in horticulture) Contract farming is challenged by high standards of retailers	Advanced technical models of flower and horticulture production	Lease, purchase or inheritance

Business Models in Mozambique

Type of actors	Degree of integration	Model of investment	Juridical form	Organization of the agricultural production model	Technical agricultural model	Ways of accessing land
Domestic, international (South Africa, European, Indian and others)	Food crops for national markets, other crops to SA (macadamia) and Europe/USA (tea, sisal) as well as Africa, and Middle East (bananas)	Unknown	Joint ventures with international companies. Private companies.	Plantations and contract farming	Diverse. Tea plantations with low productivity. Sisal: International competitive producers Soya: Macadamia:	Allocation (purchase) by government, Purchase and rental of of DUAT, former state land, or former private and state companies

Business Models in Madagascar

Type of actors	Degree of integration	Model of investment	Juridical form	Organization of the agricultural production model	Technical agricultural model	Ways of accessing land
Foreign agro-industry (mainly european)	Independent production structure	Self financed and loans	Private companies	Estate / Plantation	Intermediary level of mechanization – no irrigation	Land lease with the State
Foreign or national entrepreneurs	Coordination for production / processing and export	Self financed and loans	Private companies	Contract farming – with formal contracts and hundreds even thousands of family farmers	Peasant farming No mechanisation Manual irrigation Interesting for farmers because crop cultivated during dry season	No direct land access
Big farmers, mostly national entrepreneurs	Independent production structure	Self financed – low investment budget	Individual entrepreneurs	Estate plantation & contract farming	Low level of mechanisation and intensification – no irrigation	Land lease with the State

Household Socio-Economic Impacts

Sampling details

	KENYA	MOZAMBIQUE	MADAGASCAR
Total interviews	546	504	601
Factual Zone (FZ)	*376*	*276*	*401*
Counterfactual Zone (CFZ)	*170*	*228*	*200*
% Employee FZ	13% (9% CFZ)	46% (25% CFZ)	15% (10% CFZ)
% Contract FZ	17% (12% CFZ)	4% (2% CFZ)	27% (18% CFZ)

Comparing key results

	KENYA	MOZAMBIQUE	MADAGASCAR
Jobs/ha created	Many (0.5-25 pers/ha) (except a few cereal farms)	Few (0.1 to max 1 job/ ha)	Estates: 0,3 job / ha Contract farmer: reinforce existing jobs up to 1,3 job/ ha
Characteristic of work force (employee)	Many migrants Slightly more women Young employees (34 years)	Mostly males Av. age 37 years	Mainly migrants and males (34 years)
Asset creation in rural HH => Workers	Salaries for daily expenses and savings for economic diversification	Salaries used for daily expenses, no asset creation	
Asset creation in rural HH => Contract farming	HH with better productive and non-productive assets	in some sectors (plantation/sugar), some productive assets, but generally under full mgt. of agribusiness	Education fees and limited farm investments
Conflicts reported	No acute conflict around LAI reported, access to water creates tensions	On previous colonial structure: few conflicts. New farms: Important source of conflict; HH lose	Depending on business model: conflicts with large estate/no conflict with contract farmers

Food Security – level and severity

Comparative (within countries and between countries) assessment of counterfactual and affected communities in terms of the following food security indicators:

- Assets ownership (proxy for food access and income levels)
- Months of adequate household food provisioning (12 months)
- Coping Strategies Index (behavioural responses to food shortages)
- Household Dietary Diversity Index (diet quality)
- Food Consumption Score (diet adequacy)
- Women's Dietary Diversity (diet adequacy)

Results are currently being analysed.

Food Security – policy
Preliminary insights

Comparative analysis of policies related to food security and nutrition.

- Each country has a CAADP National Agriculture and Food Security Investment Plan (currently under review and due for renewal)
- Each has a National Plan of Action for Nutrition – also need revision and renewal
- Each has food security policies that have not been evaluated and updated to deal with current changes in the national, regional and global food security and nutrition context.

Further investigation is underway to identify the land and agricultural programmes and policies and their interface with food security and nutrition.

Preliminary insights from the Kenyan analysis

- Assets seem to increase where there are larger scale investments
- Most households seem to have access to food for 10 – 12 months of the year
- Patterns of coping need further investigation – no clear pattern emerges across sites – within or between sample and counter-factual

Preliminary conclusions

Policies: all countries have pro investment position policies and civil society is +/- organized: but results are different

Progressive land laws to secure peasant farming and land rights exist but are not enforced

Implementation of LAIs: favorable institutional and economic environment needed to successfully implement investments, very difficult to start from scratch.

Business models: are very different among and also within the different countries; but some converging trends per country

Socio-economic impacts : Mainly depend on business models (contract farming or not; labour intensity of production model) and land tenure context

Impacts on territory scale : low (except where clusters of well established farms are operating, i.e. Kenya)

Preliminary conclusions

Implementation of LAIs: huge difficulties to start an agricultural investment from scratch without the favorable institutional and economic environment - land resources are not enough. (Easier on former colonial farms (Mozambique) or where commercial farms already exist (Kenya))

Policies: all countries have pro investment position policies and civil society is +/- organized (Result: Kenya no acute problem in the mount kenya region / moz and mada : local reaction and growing national protest)

Progressive land laws to secure peasant farming and land rights exist but are not enforced // or not enough (pastures protection in mada, itinerant farming in Moz)

Preliminary conclusions (cont.)

Business models: are very different among and also within the different countries; but some converging trends per country - seem to be shaped by national context (governance, history and maturity of agricultural sector, market integration, percieved economic opportunites for investors and type of production)

Socio-economic impacts : Impacts depend on business models (contract farming or not; labour intensity of production model) and land tenure context

Impacts on territory scale : on infrastructures, local economic organization or social services are low (except where clusters of well established farms are operating, which together contribute substantially to job creation, infrastructure, regional capacities and tax income, i.e. Kenya)

Preliminary conclusions (cont.)

Trade-offs & synergies

— Trade-offs between socio-economic impacts (job creation) vs. environmental impacts and conflicts are revealed.

— Trade-offs/conflicts among sustainability goals are less acute, if

(1) business model implies or smallholder inclusion through contract farming or

(2) business models imply high labour intensity and

(3) LAIs are done on land on which land users have previously not been highly dependent.

Outlook

- Implementation of research in three countries with five different resarch organisations is challenging
- Analysis of data is still on-going, first results are only starting to emerge
- Cross-comparison of three countries is providing interesting insights into differences in the land aquisition process
- Publication of results by mid-2018 (scientific papers, synthesis report, policy briefs)

Thank you!

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